

ABSTRACT OF THE DISCLOSURE

A semiconductor wafer cleaning apparatus includes a gas spraying unit, having a gas injection tube and a gas guard extending therearound, for spraying cleaning gas into a water layer formed on a wafer. The gas guard forms a small chamber just above the water layer, so that the partial pressure of gas injected from the gas injection tube is increased in the small chamber, whereupon the cleaning gas readily dissolves in the water layer. As a result, a cleaning solution having a high concentration of cleaning gas is produced, whereby the cleaning efficacy of the solution is high. Subsequently, a drying gas, such as isopropyl alcohol, for drying the wafer can be ejected onto the water layer using the gas spraying unit. Thus, the semiconductor wafer cleaning apparatus has a simple structure.